Dr. C. B. Ticehurst and Major R. E. Cheesman in their paper "The Birds of Jabrin, Jafura, and Hasa in Central and Eastern Arabia and of Bahrain Island, Persian Gulf," published in *Ibis,* 12th series, Vol. 1, No. 1, January, 1925, say of the lark *Alaemon alaudipes cinerea* (Zar.):

> It would seem to be one of those species which has solved the problem of life without drinking, for it was met with as much as seventy miles away from the nearest well, though it is possible that occasional morning mists and dew observed in the sand-dunes would enable it to take drops of moisture from the bushes; however, it must be able to exist for long periods without drinking, and it was never seen at wells or water-holes, a fact which one of us noted also in the Sind desert.

Nestling birds, obviously, are unable to get water, except as it comes to them. It is possible that showers may at times wet the rim of exposed nests sufficiently to allow them to secure water droplets.

Mr. Meade Waldo appears to have been the first to describe a unique method by which the young of the sand grouse *Pteracles* kept in his aviaries sometimes obtain water, publishing his observations in "The Zoologist" (1896, p. 299). His observations would indicate that water is actually conveyed to the young, and by the male alone. He says, "The male rubs his breast violently up and down on the ground—a motion quite distinct from dusting—and when his feathers are awry gets into his drinking water and saturates the feathers of his underparts. When soaked he goes through the motions of flying away, nodding his head, etc.; then, remembering his family is close by, he would run to the hen, make a demonstration, and when the young run out, get under him, and suck the water from his breast." He states that it appeared like a mammal suckling its young and "The young pass the feathers through their bills, and keep changing places until the supply becomes exhausted. Until the young can fly they take water in no other way, and the cock gives it to the young only."

Dr. Glover Allen in his book, "Birds and Their Attributes," has seen pine siskins in the far north eating snow, and he once watched a flock of cedar waxwings flying into the air to catch snowflakes as if they were insects.

I may state that the introduced starling, with its remarkable ability to meet most situations successfully, seems to worry little about the presence of water in winter-time. For several years I have had these birds nesting in a box close to my bedroom window, and on many occasions I have observed them eating snow heartily where it had lodged upon the top of their box which they frequented throughout the winter.

Several times, both at Clarendon, Va., and at Washington, D. C., I have seen them in numbers during snowstorms, flying back and forth engaged in catching snowflakes. However, I have seen them engaged in the same aerial activities in summer-time to catch ants and other insects swarming in the air. Whether the birds are actually catching the flying snowflakes because they are thirsty or whether they may have thought they were flying insects, I do not know. The habit of eating snow is surely to satisfy thirst or the needs of the body for water.

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SELENITE NOT A CERTAIN INDICATOR OF WIND EFFECT[1]

SCHOEWE and Bryan[2] have suggested that selenite fragments having etched surfaces could be used as criteria for wind action because selenite readily becomes frosted when treated with the sand blast in the laboratory.

In Eddy County, New Mexico, and in Reeves and Culberson Counties, Texas, the upper Permian formations are upturned and truncated, and massive anhydrite beds, exposed to weathering, are altered to gypsum, which covers wide expanses of territory. Although gypsum is one of the less common products of sedimentation, it has thus become the most conspicuous rock in this northwest sector of the Delaware Basin.

Anhydrite alters to various types of gypsum. Selenite, a variety of gypsum, occurs often as large crystals. It is most abundant in lake bed deposits or on playas, or along exposures in bluffs where crystals 1 to 2 feet in length are not uncommon. In the vicinity of Salt Draw, some twenty miles south of Carlsbad, New Mexico, a bed of selenite enclosed in redbeds crops out across the old highway and the railroad right of way. The excavation for the track was made in 1891, and the material thrown aside has remained virtually undisturbed since then. The writer has passed this outcrop many times in a period of ten years; and he has had opportunity to make numerous field observations. He was originally attracted to this outcrop by the brilliant scintillating reflections of sunlight from the shining surfaces of the selenite.

At this locality selenite crystals perched on small prominences and fully exposed to the wind have retained enough of their original brilliance to look as if they had new cleavage faces. Examination, however, shows their surfaces to be the product of natural weathering in a region where the average annual rain-

[1] Published by permission of the Director of the U. S. Geological Survey.

[2] W. H. Schoewe and Kirk Bryan, "Selenite Fragments or Crystals as Criteria for Wind Action," SCIENCE, 72: 1859, 169–70, August 15, 1930.

fall is 15 inches and the winds in spring often are of sufficient intensity and persistence to scour out cotton fields to the depth of a foot in a few hours and to drive quarter-inch pebbles through the air. The preservation of the selenite in Salt Draw is due not to the absence of wind action but rather to the lack of tools sufficient to make wind action effective. The character of the material available to the wind at any given place is dependent upon the composition of the terrain over which it blows, as is readily shown by a comparison of the color of the material transported by storms. The prevailing westerly winds sweeping down the Sacramento cuesta fill the air with dust of a sickly yellowish hue, acquired from the limestone and gypsum surfaces over which they have swept; whereas winds from the same direction crossing the Pecos River and moving eastward into Texas become, when violent, a coffee-brown, because they are laden with fine sand and redbed silt.

Bright selenite fragments may indeed serve to indicate the local ineffectiveness of wind action in isolated or protected places, but they also suggest a scarcity of abrasive material in the windswept terrain. Certainly, they do not prove the absence of wind action or that the selenite fragments have been so recently broken as to present fresh cleavage surfaces. On the other hand, selenite crystals that have grown in earthy ground may contain diffused impurities that give the selenite a frosted appearance, which on insufficient observation may be mistaken for wind scouring.

The appearance of selenite crystals may lend some support to other criteria in judging the nature of wind action at a given place, but as selenite is a sensitive indicator, deductions from it may prove erroneous. Caution should therefore be exercised in applying to the geomorphological history of an area interpretations based on the presence and appearance of selenite.

WALTER B. LANG

ON A WHALE SKELETON IN THE COLLECTIONS OF THE CALIFORNIA ACADEMY OF SCIENCES

IN his recent article on a blue whale skeleton in the British Museum, Mr. F. C. Fraser[1] states regarding the specimen he has under consideration that it is: ". . . almost certainly the largest articulated skeleton in any Museum in the world. The only exception to this statement may possibly be in the Museum at Buitenzorg, Java, where there is a skeleton of a whale 27.8 meters in length, but I do not know whether it is articulated."

The specimen in the British Museum yielded the following measurements: total length about 82 feet; length of flippers 10½ feet; width of flippers 2½ feet. The dorsal fin was 11 inches high and 28 inches long. The tail measured 16 feet across its outer edge. The blubber was rather tough and not very rich; it was from 10 to 4 inches thick on the back.

In view of this record it may be worth publishing the measurements of an articulated specimen of a male blue whale (*Sibbaldus musculus*)[2] in the collections of the California Academy of Sciences, San Francisco, California. This specimen was taken off the west coast of Vancouver Island in 1908, by the whaler *St. Lawrence,* operating from the Pacific Whaling Company's station at Kyuquot, British Columbia. In the flesh this whale measured 87 feet; and from it was obtained 60 barrels of oil, 8 tons of fertilizer and 400 pounds of baleen. The skeleton measures: Length, 75 feet; head (total length), 20 feet 6 inches; mandible, 19 feet; fore flipper, 10 feet 10 inches; longest rib, 10 feet 4 inches.

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A NEW MAMMOTH RECORD FOR ILLINOIS

A RECENT acquisition of Pleistocene mammal material in the Museum of Natural History of the University of Illinois appears to be worthy of record. It consists of the lower jaw with teeth intact and two upper first molars. The lower molars represent the third milk teeth, which had cut through the gums and had been used. The upper molars are the third milk teeth, but they had not cut through the gums when the baby elephant died, the crowns being wholly unworn. The animal was apparently about six years of age, as compared with the recent elephant.

The location from which the skeletal material came is situated about eight miles southwest of Paris, Edgar County, Illinois. The deposit is gravel, representing, probably, outwash from the Shelbyville moraine of the Wisconsin glacier. The teeth and jaw were on top of the clay, evidently the Illinoian till, at the base of the gravel and at a depth of 10 or 12 feet below the surface. The animal, therefore, lived in the Sangamon interglacial interval. The specimen belongs to the hairy mammoth species, *Elephas primigenius boreus* Hay.

During the work of the CWA in Illinois many reports of elephant finds were recorded in the newspapers, but few of these appear to have gotten into scientific journals. It is to be regretted that these finds were not permanently preserved in some of our museums. It is probable that two species of Elephas and one of Mastodon or Mammut were represented.

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[1] *Nat. Hist. Mag.*, 4: 30, 228–230, 1934.

[2] *Vide* Miller, *U. S. Nat. Mus. Bull.*, No. 128, p. 506, 1924.